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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,097	12/18/2001	Jose Edmans Forti	P07464US00/RFH	9940
881	7590	11/07/2003	EXAMINER	
LARSON & TAYLOR, PLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			BHAT, ADITYA S	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,097

Applicant(s)

FORTI, JOSE EDMANS

Examiner

Aditya S Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45-90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett (USPN 5,311,451).

With regards to claim 45, Barrett (USPN 5,311,451) teaches a computer card for controlling electro-pneumatic calibrators of a system including:

a tire pressure sensor, a compressor pressure sensor for sensing the pressure of a system compressor, a temperature sensor, (19 figure 1)

a water inlet control, a vacuum cleaner control, an electric heater control, (13;figure 1)

an alarm, (Col. 5, line 3)

a modem providing input information and output information, (Col. 20,lines 36-37)

solenoid valves for controlling inflation of a tire with air, inflation of a tire with nitrogen, and deflation of a tire,

solenoid valves for the system compressor, and

a purge valve, said computer card being adapted to be connected to a power source and a relay, and

including; in a front part thereof, a liquid crystal display and a data input keyboard for entering data into the computer card, (25; figure 4)

said computer card further comprising a microchip controller for storing system management programs and for receiving information from said data input keyboard and from said tire pressure sensor, said compressor pressure sensor, said temperature sensor, said modem, and a mechanical enabling key, (13 figure 4) and

for controlling operation of said solenoid valves for controlling inflation of a tire with air, inflation of a tire with nitrogen, and deflation of a tire,

said solenoid valves for the system compressor, said water inlet control, said vacuum cleaner control, said heater control, the output information of said modem, said alarm, and said liquid crystal display.

With regards to claim 46, Barrett (USPN 5,311,451) teaches the liquid crystal display comprises a front display, and wherein the system further comprises a rear liquid crystal display. (27 figure 1)

With regards to claim 47, Barrett (USPN 5,311,451) teaches the microchip controller transmits information to the front display and to the rear display, before, during and after the calibration operation, to provide displaying of previously defined messages. (310 figure 3)

With regards to claim 48, Barrett (USPN 5,311,451) teaches the microchip controller receives temperature data from the temperature sensor and provides for display of said temperature data on said front display and said rear display. (317 figure 3)

With regards to claim 49, Barrett (USPN 5,311,451) teaches the microchip controller commands the activation of a heater, as needed, for protection of the front display and rear display against the damaging effects of low temperatures.

With regards to claim 50, Barrett (USPN 5,311,451) teaches the microchip controller receives data from a clock and provides information with respect to preventive maintenance and replacement of spare parts on the front display and the rear display. (341, 277;figure 3)

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With regards to claim 51, Barrett (USPN 5,311,451) teaches the microchip controller is connected to a sensor for detecting a parameter relating to the operation of the compressor and, if necessary, immediately interrupts compressor operation, and provides a corresponding message on the front system display and the rear display. (19 figure 1)

With regards to claim 52, Barrett (USPN 5,311,451) teaches said parameter is compressor oil level.

With regards to claim 53, Barrett (USPN 5,311,451) teaches the microchip controller, upon entering an emergency mode, instantly opens a solenoid valve for controlling deflation of a tire, interrupts at least one action by the system, provides for display of a corresponding message on the front display and the rear display, and activates the alarm.

With regards to claim 54, Barrett (USPN 5,311,451) teaches the microchip controller checks on current tire pressure and interrupts system operations when a pressure reading is sensed which is incompatible with previously executed operations.

With regards to claim 55, Barrett (USPN 5,311,451) teaches the microchip controller checks and accepts a new zero reference for pressure inside preset limits set every time the system is used, and interrupts system operation when pressure values are outside of said preset limits.

With regards to claim 56, Barrett (USPN 5,311,451) teaches a said purge valve is provided on a compressor tank of the system compressor and on at least one of a filter, dryer, condenser separator and an air network, and wherein the microchip controller controls the purge valve on the compressor tank and the purge valve on at least one of said filter, dryer, condensed separator and air network. (316; figure 3)

With regards to claim 57, Barrett (USPN 5,311,451) teaches the microchip controller manages and turns on and off the system compressor according to one of (i) preset values and (ii) a calculation with respect to operational pressure limits.

With regards to claim 58, Barrett (USPN 5,311,451) teaches 45, further comprising a safety valve.

With regards to claim 59, Barrett (USPN 5,311,451) teaches a second liquid crystal display along with a second screen and key set are disposed on a back portion of a housing so as to form a double-faced unit.

With regards to claim 60, Barrett (USPN 5,311,451) teaches 45, further comprising a serial communication port for receiving and transmitting data at least to one of a remotely operated modem, a printer and an infrared sensor.

With regards to claim 61, Barrett (USPN 5,311,451) teaches an overpressure value is entered in the system for calibration of large tires.

With regards to claim 62, Barrett (USPN 5,311,451) teaches 45, further comprising a special emergency key adapted to be activated by hardware.

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With regards to claim 63, Barrett (USPN 5,311,451) teaches 45, further comprising a relay for disconnecting an energy supply to the system and activating the solenoid valve for controlling deflation of the tire every time an emergency key is pressed.

With regards to claim 64, Barrett (USPN 5,311,451) teaches 45, further comprising a voltage to frequency converter for converting system voltage signals into a corresponding frequency.

With regards to claim 65, Barrett (USPN 5,311,451) teaches the microchip controller activates and monitors tire inflation and deflation responsive to the insertion of coins into the system.

With regards to claim 66, Barrett (USPN 5,311,451) teaches the microchip controller identifies the insertion of coins and activates a water pump and an opening valve and a closing valve of the water inlet control.

With regards to claim 67, Barrett (USPN 5,311,451) teaches the microchip controller activates solenoid valves of the vacuum cleaner control to open and close a vacuum supply for a vacuum cleaner, in response to the insertion of coins into the system.

With regards to claim 68, Barrett (USPN 5,311,451) teaches the microchip controller identifies the insertion of coins, and activates and monitors a detergent supply system responsive thereto.

With regards to claim 69, Barrett (USPN 5,311,451) teaches the microchip controller activates and monitors a nitrogen supply system.

With regards to claim 70, Barrett (USPN 5,311,451) teaches the microchip controller incorporates counters and totalizers for coins, for providing per operation, counting per kind of function counting used and general counting.

With regards to claim 71, Barrett (USPN 5,311,451) teaches counting totals for coins received by the system are provided responsive to use of a unique password for checking exactness and authenticity.

With regards to claim 72, Barrett (USPN 5,311,451) teaches the microchip controller system provides detection, at any time, of whether a tire is or not connected correctly to the system.

With regards to claim 73, Barrett (USPN 5,311,451) teaches the microchip controller, during inflating or deflating of a tire, detects possible pressure losses in a pressure line connected to the tire.

With regards to claim 74, Barrett (USPN 5,311,451) teaches the microchip controller checks whether the system is connected to tires without harm to an auto-reset function.

With regards to claim 75, Barrett (USPN 5,311,451) teaches the microchip controller processes an internal routine controlling only initiating a process for inflation or deflation of a tire, after the controller verifies that a line to be pressurized is completely stabilized, and presents an error message when pressure in a line connected to the tire does not stabilize after a predetermined period of time.

With regards to claim 76, Barrett (USPN 5,311,451) teaches the microchip controller calculates stabilization speed for current line pressure and compares the

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calculated stabilization speed with a standard minimum speed, and, depending on the results of the comparison, certifies that the line pressure is stable.

With regards to claim 77, Barrett (USPN 5,311,451) teaches the liquid crystal display displays an estimated time for finishing inflating or deflating of a tire, and said estimated time is updated on every pulse received by the liquid crystal display.

With regards to claim 78 Barrett (USPN 5,311,451) teaches the microchip controller stores, internally, standard minimum and maximum pressure limits that are preset for each type of installation with which the system is to be used.

With regards to claim 79 Barrett (USPN 5,311,451) teaches the microchip controller is adapted to receive changes with respect to minimum and maximum pressure limits, by means of said input keyboard, after inputting of a password by an authorized person.

With regards to claim 80, Barrett (USPN 5,311,451) teaches the microchip controller automatically calculates a minimum reliable pressure pulse in order to subsequently calculate a total inflating/deflating time for a tire.

With regards to claim 81 Barrett (USPN 5,311,451) teaches the microchip controller enters a standby mode a predetermined period without use, or if no key of the input keyboard is pressed.

With regards to claim 82, Barrett (USPN 5,311,451) teaches the microchip controller interrupts operation of the system, provides for exhibiting of a corresponding message, opens said deflation valve and activates the alarm, every time an error, failure or discrepancy occurs for three consecutive times during performance of a system operation or function.

With regards to claim 83, Barrett (USPN 5,311,451) teaches the microchip controller interrupts operation of the system, exhibits a corresponding message, opens said deflation valve and activates the alarm, every time any key is pressed during system operation.

With regards to claim 84, Barrett (USPN 5,311,451) teaches 45, further comprising a three-way solenoid valve for, when turned off, diverting air to the atmosphere so as to allow the compressor to operate continuously and without heating.

With regards to claim 85, Barrett (USPN 5,311,451) teaches the microchip controller provides for exhibiting of the complete totals of all items used and totals of all failures that occur.

With regards to claim 86, Barrett (USPN 5,311,451) teaches the microchip controller commands procedures including turning on the compressor, release of line pressure and checking of a compressor minimal internal pressure, and wherein when the system does not reach said minimal internal pressure, causes an "out of service" message to appear on the liquid crystal display.

With regards to claim 87, Barrett (USPN 5,311,451) teaches the liquid crystal display continuously exhibits the current time and a remaining usage time, and wherein the microchip provides for turning on of the system once said usage time has elapsed.

With regards to claim 88, Barrett (USPN 5,311,451) teaches the system includes an air retention tip as a replacement for functions of those associated with filling of an empty tire.

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With regards to claim 89, Barrett (USPN 5,311,451) teaches the system, once operation thereof is terminated, goes back into operation only after entry of a newly issued password.

With regards to claim 90, Barrett (USPN 5,311,451) teaches, during inflation of a tire, the system makes a check to ensure there is enough pressure in the airline. (321 figure 3)

With regards to claims 45-90, Barrett (USPN 5,311,451) does not appear to teach a tire pressure sensor, a compressor pressure sensor, water inlet control, a vacuum cleaner control, an electric heat control solenoid, solenoid valves for controlling inflation of a tire or purge valves, microchip controller activates and monitors tire inflation and deflation responsive to the insertion of coins into the system.

Barrett (USPN 5,311,451) does teach a system for electric pneumatic devices, which control a wide variety of parameters (Col.2, lines 16-25).

It would've been obvious to one skilled in the art at the time of the invention to modify Barrett (USPN 5,311,451) to control the other parameters in the claimed invention. Regarding the tire pressure sensor, a compressor pressure sensor, water inlet control, a vacuum cleaner control, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed and does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d-1647 (1987).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not


mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 703-308-0332. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Aditya Bhat
October 28, 2003



John Barlow
Supervisory Patent Examiner
Technology Center 2800